Jacksonville Electric Authority

Smart Energy Project

Abstract

Jacksonville Electric Authority's (JEA) Smart Energy project involves the installation of smart meters, supporting communication infrastructure, and advanced electric service programs for customers. A limited number of customers are receiving new smart meters that can more precisely monitor real-time electricity usage. A new communications system transfers customer data to the utility where upgraded software platforms analyze and present the data to grid operators. The meters eliminate the need for truck visits for meter reading, reduce costs and emissions, and enable the development of new electric service program offerings for customers. This project, including a Web portal and voluntary time-of-use rate programs, increases customer control of their electricity use and costs.

At-A-Glance

Recipient: Jacksonville Electric Authority

State: Florida

NERC Region: Florida Reliability Coordinating Council

Total Budget: $26,204,891

Federal Share: $13,031,547

Project Type: Advanced Metering Infrastructure and Consumer Systems

Equipment

- **3,000 Smart Meters**
- **AMI Communication Systems**
  - **Meter Communications Network**
  - **Backhaul Communications**
- **Meter Data Management System**
- **Customer Web Portal Access for 3,000 Customers**

Time-based Rate Programs

- **Time of Use**

Key Targeted Benefits

- **Reduced Meter Reading Costs**
- **Reduced Operating and Maintenance Costs**
- **Reduced Truck Fleet Fuel Usage**
- **Reduced Greenhouse Gas and Criteria Pollutant Emissions**

Smart Grid Features

Communications infrastructure includes the installation of a two-way meter data network across the entire service territory. An upgraded meter data management system (MDMS) is being installed to provide a software platform for organization and analysis of the metered load data. The MDMS provides the base for transferring information to customers via a Web portal. The new communications infrastructure provides capabilities for real-time, remote monitoring of power disturbances using an upgraded software platform for the outage management system. This allows for a more rapid response to outages and enhances overall distribution reliability.

Advanced metering infrastructure (AMI) includes the installation of 3,000 smart meters. These meters have the ability to digitally record consumption and power quality data in hourly time intervals. The meter data enables improved planning for distribution management and allows for development of time-based rate programs. The meters report consumption data remotely, which provides outage detection capabilities. The meters also provide the ability to remotely connect and disconnect customer accounts. Remote meter reading and outage detection lowers operational costs and emissions currently incurred through truck visits for meter reading and grid maintenance while improving the utility's outage response time.

Advanced electricity service options include a Web portal for electric customers to access their consumption data. The Web portal allows all customers with smart meters to view their electricity consumption and provides them with

Jacksonville Electric Authority *(continued)*

information to better manage their bills. The new metering communications infrastructure and meter data management system is integrated with this Web portal to post hourly electric consumption data for customer access.

Time-based rate programs include new customer options to enroll in time-of-use rates. JEA expects the time-of-use customers to shift consumption from peak- to off-peak periods. In addition to time-based rate programs, JEA is implementing pre-pay pricing to provide customers with added flexibility and control over their electric bills.

Timeline

Key Milestones	Target Dates
Customer Web portal launch	Q2 2012
Advanced meter infrastructure installation completed	Q2 2012
Time-based rate program launch	Q4 2012

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